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**UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA**

METRO-GOLDWYN-MAYER
STUDIOS INC., et al.,
Plaintiffs,

v.

GROKSTER, LTD., et al.,
Defendants.

JERRY LEIBER, et al.,
Plaintiffs,

v.

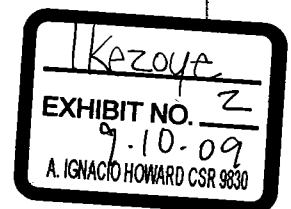
CONSUMER EMPOWERMENT BV
a/k/a FASTTRACK, et al.,
Defendants.

AND RELATED COUNTERCLAIMS

CV 01-08541 SVW (FMOx)
(Consolidated with: CV 01-09923 SVW
(FMOx))

**DECLARATION OF VANCE
IKEZOYE IN SUPPORT OF
PLAINTIFFS' MOTIONS FOR
SUMMARY JUDGMENT**

Date: May 1, 2006
Time: 1:30 p.m.
Ctmm: The Hon. Stephen V. Wilson



1 I, Vance Ikezoye, the undersigned, declare:

2 1. I am the President and Chief Executive Officer of Audible Magic
3 Corporation. I make this declaration to demonstrate that there are methods to
4 prevent unauthorized recordings from being distributed on peer-to-peer systems
5 like those operated by defendants; such methods have been and continue to be
6 deployed, with tremendous success, in mass scale commercial settings. I have
7 personal knowledge of the following facts and, if called and sworn as a witness,
8 could competently testify thereto.

9 2. Established in 1999, Audible Magic focuses on the application of
10 content-based audio identification technology as a solution for digital rights
11 management. It is the leader in providing content management services to the
12 digital media and entertainment industries.

13 3. From the beginning, Audible Magic has proudly disseminated
14 information on the capabilities and successes of our technology. Audible Magic
15 has a regular and frequent presence in industry conferences. We continue to
16 market our technology in emergent and evolving contexts.

17 4. The core of Audible Magic's work is audio recognition technology
18 that classifies sound based on its perceptual characteristics. A company called
19 Muscle Fish, LLC, which began in 1992 and which Audible Magic acquired in
20 July 2000, originally developed the technology. This technology relies on Mel-
21 Filtered Cepstral Coefficients ("MFCCs"), which are measurements that accurately
22 characterize and model audio in the same way the ear perceives sound. When a
23 person hears any sound, the human ear perceives the spectra of the sound. (A
24 spectrum measures amplitude as a function of frequency.) We have found that
25 measuring the shape of the spectrum is the method of identifying uniqueness in a
26 segment of audio that is the most accurate and robust, i.e., able to work in many
27 different environments and despite changes in format and acoustic and digital
28

1 modifications. Thus, Audible Magic's technology analyzes the shape of the
2 spectrum inherent in a digital audio file. The MFCC describes the shape of that
3 spectrum, adjusted for the way that the human ear actually perceives sound.

4 5. The analysis performed by this technology produces a set of numeric
5 values called a "feature vector" or "digital fingerprint," which is absolutely unique
6 to a particular master recording, whether a sound recording or the soundtrack to a
7 video or motion picture. In essence, each digital fingerprint identifies a master
8 recording, much as a human fingerprint identifies a person. The fingerprinting
9 technology works on all forms of audio, regardless of the digital format into which
10 the audio has been encoded.

11 6. The fingerprint remains constant through all typical audio processing,
12 such as the compression that occurs when an audio file is encoded into digital
13 formats, including MP3, the most popular format. Thus, one fingerprint can be
14 used to recognize all manipulated forms of the original audio. The fingerprints are
15 accurate enough that they can differentiate between various live and studio
16 performances of a single song.

17 7. Audible Magic's technology also accurately identifies songs
18 regardless of the bit rate of the file. The bit rate is the number of bits (small pieces
19 of data) that occur in a given amount of time, usually a second. Thus, a bit rate is
20 usually expressed in some multiple of bits per second -- for example, kilobits, or
21 thousands of bits per second (Kbps). The higher the bit rate, the larger the file and
22 the better the sound quality. Users can set the bit rate at several different levels,
23 but the identification technology will work in a range of bit rates from highly
24 compressed 20 Kbps to CD quality, over 300 Kbps. This range includes the bit
25 rates used by regular users of P2P services, who generally prefer the higher quality
26 that comes with higher bit rates, usually at least 56 Kbps and more often much
27 higher.

1 8. The fingerprints are very small. Only 20 seconds of a master
2 recording is needed to create the fingerprint. A typical fingerprint is hundreds of
3 times smaller than a typical file encoded in MP3, the most popular digital format
4 for sound recordings, and thousands of times smaller than a typical WAV file
5 (another popular digital format for sound recordings). The small size of the
6 fingerprint makes it much easier to store and much faster to transmit and check the
7 fingerprints of unknown audio files against a reference database of fingerprints of
8 known recordings.

9 9. The fingerprint technology is very secure and cannot be tampered
10 with. As long as the audio is not distorted to the point that the listening experience
11 is significantly affected, the fingerprint will positively identify the recording.

12 10. Audible Magic possesses a database of fingerprints from
13 approximately 6 million copyrighted songs. This database roughly represents the
14 music available for purchase in North America and consists of music from the four
15 major and over 500 independent music labels. Fingerprints from this large archive
16 are used to populate an Audible Magic Identification Server with a reference
17 database.

18 11. Audible Magic markets several tools that employ our patented audio
19 fingerprinting technique. Our "CopySense P2P Plug-in" can be easily integrated
20 into any file-sharing service. Based on our content identification technology and
21 services, the CopySense P2P Plug-in provides the file-sharing network with the
22 ability to identify, filter, and link to purchase any registered copyrighted file.
23 Additionally, our "CopySense Network Appliance" was designed specifically to
24 intelligently manage P2P applications at a network level. Its capabilities include
25 identifying and blocking (or allowing) P2P files containing offending media
26 content such as copyrighted songs, by performing "on-the-fly" matches of files
27 against copyrighted material registered in our database. Finally, our "Replicheck"
28 service allows the media manufacturing industry to automatically check

1 reproduction jobs for copyrighted content by matching each song on a CD master
2 against our database.

3 12. With the Copy Sense P2P Plug-in, Audible Magic's fingerprinting
4 technology is currently being used to "block" or prevent unauthorized recordings
5 from being distributed and copied in P2P systems. These systems are very similar
6 to those operated by defendants in this case.

7 13. For example, Audible Magic has successfully deployed the audio
8 fingerprinting technology in the iMesh system. The Audible Magic tool has been
9 adopted by hundreds of thousands of iMesh users and currently appears to make up
10 a significant majority of all active iMesh users.

11 14. The Audible Magic tool has demonstrated itself to be readily scalable
12 to enormous volume.

13 15. Based on the Audible Magic technology that was incorporated into the
14 iMesh client, an audio fingerprint was calculated for each target file at the client
15 level. That fingerprint was communicated to an Audible Magic Identification
16 Server hosting a database of fingerprints corresponding to works not authorized for
17 distribution. If the fingerprint of the unknown audio file matched a fingerprint in
18 the reference database, the identification server responded with a command to the
19 user module to "block" the file. If the fingerprint was not recognized, the server
20 sent a "do not block" command. When the module received a "block" command
21 from the server, it terminated the transfer and deleted what had already been
22 received. A "do not block" command resulted in the completion of the download.
23 The iMesh-Audible Magic filter was, therefore, a "filter out" filter, meaning that
24 all files were permitted to be freely exchanged unless the work was specifically
25 identified as one that was not authorized for distribution.

26 16. The iMesh-Audible Magic filter was designed to filter on both the
27 "download" side (when the iMesh user attempted to download a file from another
28 user) and the "upload" side (when someone attempted to obtain a file from the

iMesh user). In this way, iMesh could ensure that its users were not downloading or distributing to others files not authorized for distribution. In addition, the Audible Magic technology was "network agnostic," which meant that it filtered sound recordings on multiple networks, across platforms, without regard to the particular brand of client application on the other end of the intended transfer.

17. I understand that testing of the iMesh-Audible Magic filter has demonstrated, with real world empirical evidence, that the audio fingerprinting filter would successfully block well over 99% of the files unauthorized for peer-to-peer distribution. These results confirm our own evaluations and testing of the fingerprinting technology. That technology, moreover, can be implemented on its own, or in conjunction with other filters.

18. iMesh is currently using an architecturally similar version of the Audible Magic tool in its commercial business relating to the authorized distribution of licensed recordings. In that enterprise, iMesh is licensed to distribute certain works. With the Audible Magic fingerprinting technology, iMesh is able to ensure that its users are not downloading or distributing files that are not authorized for distribution, regardless of the network to which iMesh is connected and regardless of whether that network contains different brands of client applications that do not filter out copyrighted works. The Audible Magic-iMesh filter has scaled seamlessly to 5 million "look-ups" per day, and easily could scale to meet the needs of any network in use today.

19. Audible Magic has also implemented its fingerprinting technology on a mass scale at the educational network and ISP level. For example, over 60 universities use Audible Magic's CopySense Network Appliance, which is able to completely block all P2P protocols. The system enables the schools to filter P2P traffic by blocking all transfers or by blocking only those transfers containing copyrighted or sexual content. The many schools that use the CopySense Network Appliance include the following publicly announced universities: Central

1 Washington University; Fresno Pacific University; Texas A&M, Kingsville;
2 Tulane University; University of Maryland, Coppin State; University of Portland;
3 and Wittenberg University. Many of these schools turned to Audible Magic
4 because illegal file sharing was debilitating their network bandwidth. At
5 Wittenberg University, for example, it was the Student Senate that unanimously
6 voted to block illegal file-sharing, because of the poor network performance that
7 was being caused by illegal file-sharing. Twice in the same year, P2P traffic had
8 taken the university's network bandwidth down to zero. Audible Magic's
9 technology resolved the issue simply by blocking the illegal file-sharing. Similar
10 positive effects on network bandwidths were seen at each of the other universities
11 to employ the technology. The Audible Magic device monitors myriad protocols
12 simultaneously and terminates transfers in real-time at each of these schools.

13 20. Needless to say, our technology is effective when our database is
14 comprehensive. Any initial press reports of early stumbles pertaining to the iMesh
15 deployment are almost entirely attributable to initial delays in populating our
16 reference database. That database is now expansive, and it continues to grow. As
17 discussed above, our technology has been implemented in numerous mass scale
18 commercial settings with tremendous success.

19 21. In sum, for several years, Audible Magic has offered copyright
20 filtering technology and tools that could be used effectively to stop infringement
21 on P2P networks, while not interfering with the free exchange of noninfringing
22 works. The Audible Magic technology can easily handle tens of millions of
23 requests a day for identification against a reference database of millions of
24 recordings. The technology currently achieves above 99% correct identification
25 rates; our false positive identification rate is better than 1 in 10,000. These rates
26 are minimums as we have not performed tests that establish the upper bounds of
27 our technical accuracy. Audible Magic's goal, which we are continually working
28 towards, is 100% correct identification.

1 I declare under penalty of perjury under the laws of the United States that
2 the foregoing is true and correct and that this Declaration was executed on
3 February 2, 2006, at Los Gatos, CA.

4
5 
6 Vance Ikezoye